

Remarks/Arguments

The Examiner rejected claims 1-28 and 45 under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent 6,699,596 ("Yano") in view of U.S. Patent No. 5,142,192 to Takehashi et al. ("Takehashi"). The Applicants respectfully disagree with the Examiner.

The Examiner states that Yano discloses a barium thioaluminate or magnesium barium thioaluminate phosphor film with europium added as the activator. The Examiner acknowledges that Yano does not disclose a fluoride-containing insulating layer directly adjacent to the blue phosphor thin film layer. The Examiner relies on Takehashi as teaching the use of a fluoride containing insulating layers on both sides of an alkaline earth chalcogenide luminous layer.

There is no motivation to combine Yano with Takehashi. As the Examiner will appreciate, to properly combine references under 35 U.S.C. §103, there must be some suggestion or motivation to modify or combine reference teachings (MPEP §2143.01).

Here, there is simply no motivation to combine Yano with Takehashi. Takehashi teaches an EL device that may comprise an alkaline earth chalcogenide phosphor layer and may also comprise a fluoride layer. The alkaline earth chalcogenide is understood to be a binary compound such as CaS, SrS or the like (see column 7 line 34 to column 8, line 24 describing embodiments 4, 5 and 6). However, Takehashi does not teach the use of a barium thioaluminate phosphor material as in Yano, which is chemically different from an alkaline earth chalcogenide as disclosed by Takehashi. Thioaluminates were not known as electroluminescent phosphor materials in 1992 when the application giving rise to the Takahashi patent was filed.

Further, there is no indication that the use of a fluoride containing insulating layer as disclosed in Takehashi would improve the "stability" and "reliability" of the EL device of Yano using the thioaluminate phosphor, as the Examiner claims. Rather, the only mention of improved reliability in Takehashi relates to the omission of a transparent electrode (see col. 8, lines 24-29), NOT the use of the described insulating layers. Where does the Examiner get support for her assertion that the use of such insulating layers in the device of Yano would result in an improved device?

Merely because claimed elements are individually found in the prior art, it does not necessarily follow that it would be obvious to combine the elements from different prior art references. See, MPEP §2143.01 *citing Ex parte Levengood*, 28 USPQ2d 1300 (Bd. Pat. App. & Inter. 1993). Consequently, absent a motivation to combine or modify the references, it is irrelevant that the elements and/or limitations may be individually or separately known in the prior art. Clearly, the Examiner is motivated to combine Yano and Takehashi for no other reason than to arrive at the claimed invention. This is a classic example of impermissible hindsight.

Therefore, one would not be drawn to Takehashi in finding means to improve the performance of thioaluminate based phosphor films or EL devices based on these phosphor materials. Takehashi simply does not provide any motivation to use any fluoride layer adjacent the claimed phosphor material for this advantage. For these reasons the claims are not obvious.

Furthermore, and with regard to new claim 45, there is no indication in either Yano or Takehashi suggesting or disclosing the use of a fluoride layer in addition to a thick-film dielectric layer on a substrate.

CONCLUSION

In view of the foregoing comments, Applicants submit that claims 1-28, and 45 are in condition for allowance. Applicants respectfully request early notification of such allowance. Should any issues remain unresolved, the Examiner is encouraged to contact the undersigned to attempt to resolve any such issues.

If any fee is due in conjunction with the filing of this response, Applicants authorize deduction of that fee from Deposit Account 06-0308.

Respectfully submitted,

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